

SUBSTITUTE SPECIFICATION

In accordance with 37 C.F.R. §1.125, a substitute specification has been included in lieu of substitute paragraphs in connection with the present Preliminary Amendment. The substitute specification is submitted in clean form, attached hereto, and is accompanied by a marked-up version showing the changes made to the original specification. The changes have been made in an effort to place the specification in better form for U.S. practice. No new matter has been added by these changes to the specification. Further, the substitute specification includes paragraph numbers to facilitate amendment practice as requested by the U.S. Patent and Trademark Office.

IN THE CLAIMS

This is a complete and current listing of the claims, marked with status identifiers in parentheses. The following listing of claims will replace all prior versions and listings of claims in the application.

1. (Currently Amended) A corvette "~~corvette~~" vessel-type equipment system, comprising:
~~_____ having standard equipment segments, for power generation, power distribution, propulsion and automation, and having a vessel hull, (1), which is matched to the corvette "corvette" vessel-type equipment system on a size and requirement-specific basis, wherein the~~
~~_____ standard equipment segments are, formed from standard units and components which are arranged in accordance with the requirements in the vessel hull of the corvette "corvette" vessel-type equipment system, and which can be installed~~ installable in vessel hulls of different vessel-type equipment systems.
2. (Currently Amended) The "~~corvette~~" corvette vessel-type equipment system as claimed in claim 1, ~~in which~~ wherein ~~the a propulsion segment comprises~~ includes a combination of a POD propulsion segment ~~(2), which is preferably in the form of a completely electrical lightweight POD propulsion system and preferably has~~ having a power of 6 to 8, ~~and preferably 7 MW, and has~~ includes two waterjet propulsion segments ~~(3, 4), which are preferably in the form of twin waterjet propulsion systems and preferably have~~ a power of 12 to 16, and preferably 14 (2x7), MW.
3. (Currently Amended) The "~~corvette~~" corvette vessel-type

equipment system as claimed in claim 1—~~or 2~~, ~~whose~~
~~wherein a propulsion segment includes a thruster segment~~
~~(5), preferably a 0.3 MW bow jet thruster.~~

4. (Currently Amended) The "~~corvette~~" corvette vessel-type equipment system as claimed in claim 2—~~or 3~~, ~~in which~~wherein electric motors in ~~the~~ at least one of a POD propulsion segment, a (2)—~~and/or in the waterjet propulsion segment (3, 4) and/or in the~~ a thruster segment (5)—are designed with windings composed of high-temperature superconductors.

5. (Currently Amended) The "~~corvette~~" corvette vessel-type equipment system as claimed in claims 2 ~~to 4~~, ~~in which~~ ~~the~~wherein electric motors in ~~the~~ at least one of a POD propulsion segment, — (2)—~~and/or in the waterjet propulsion segments (3, 4) and/or in the~~ a thruster segment (5)—are in the form of synchronous machines with a field winding composed of high-temperature superconductors, and ~~with~~ wherein the stator windings ~~being~~ are in the form of air-gap windings.

6. (Currently Amended) The "~~corvette~~" corvette vessel-type equipment system as claimed in claims 2 ~~to 5~~, ~~whose~~ wherein waterjet propulsion segments (3, 4) are equipped with a coaxial exhaust-gas nozzle segment.

7. (Currently Amended) The "~~corvette~~" corvette vessel-type equipment system as claimed in claims 2 ~~to 6~~, ~~in which~~ wherein, in the longitudinal direction, ~~the~~ a distance between the center of the POD propulsion segment (2)—and ~~the~~ a nose of ~~the~~ a traction propeller—(13) of the POD propulsion segment (2)—~~on the one hand~~, and the nozzle outlet openings of the pods of ~~the~~ waterjet propulsion segments (3, 4) ~~on the other hand~~, is at least 15 m or

14 m, ~~and is advantageously approximately 20 m or approximately 19 m.~~

8. (Currently Amended) The "~~corvette~~" corvette vessel-type equipment system as claimed in claims 2 ~~to 7~~, ~~whose wherein~~ the vessel hull (1) is designed to broaden in the stern area of the vessel from the vessel center, ~~preferably from a width of approximately 15 m at the center of the vessel to a width of approximately 17 m at the stern~~, so that the weight of the POD propulsion segment ~~(2)~~ of, ~~for example, approximately 65 tonnes~~ and the weight of the associated equipment, ~~such as converters, controllers, etc, of, for example, approximately 10 to 15 tonnes~~ can be absorbed by means way of it, with the vessel hull ~~(1)~~ having, in the stern area of the vessel, a structure whose strength is sufficient to absorb the axial forces which occur as a result of the operation of the POD propulsion segment ~~(2)~~.

9. (Currently Amended) The "~~corvette~~" corvette vessel-type equipment system as claimed in claims 1 ~~to 8~~, in which ~~thewherein~~ a power generator segment is formed from a combination of at least one of preferably two fuel cell segments, (6, 7), preferably in the form of air breathing PEM

~~fuel cells~~ each having a power of approximately 4.5 MW ~~(net)~~ or 6 MW ~~(gross)~~, and/or generator segments ~~(8, 9)~~, ~~preferably two gas turbine powered generator~~, each having a power of approximately 16 MW.

10. (Currently Amended) The "~~corvette~~" corvette vessel-type equipment system as claimed in claim 9, ~~whose wherein~~ the generator segments include generators (8, 9) having windings composed of a high-temperature superconductor.

11. (Currently Amended) The "~~corvette~~" corvette vessel-type

equipment system as claimed in claim 9 ~~or 10~~, wherein the generator segments include ~~whose generators (8, 9) are~~ in the form of synchronous machines with a field winding composed of high-temperature superconductors, with the stator windings being in the form of air-gap windings.

12. (Currently Amended) The "~~corvette~~" corvette vessel-type equipment system as claimed in claims 9 ~~to 11~~, whose wherein the two fuel cell segments include two air-breathing PEM fuel cells, ~~(6, 7) are~~ associated, in order to supply them with hydrogen, with a diesel reformer ~~(10)~~ with a power of approximately 9 MW.
13. (Currently Amended) The "~~corvette~~" corvette vessel-type equipment system as claimed in claims 9 ~~to 11~~, wherein the two fuel cell segments include ~~whose~~ two air-breathing PEM fuel cells ~~(6, 7) are~~ associated, in order to supply them with hydrogen, with two diesel reformers, each having a power of approximately 4.5 MW.
14. (Currently Amended) The "~~corvette~~" corvette vessel-type equipment system as claimed in claims 1 ~~to 13~~, whose wherein a power generator segment is distributed over a number of ship protection areas SSB-2, SSB-3 and SSB-4 in the "~~corvette~~" corvette vessel type equipment system.
15. (Currently Amended) The "~~corvette~~" corvette vessel-type equipment system as claimed in claims 9 ~~to 14~~, in which wherein a first electrical system with two air-breathing PEM fuel cells ~~(6, 7) is~~ arranged in a third ship protection area SSB-3 which is arranged between a bow-end vessel protection area SSB-4 and a vessel protection area SSB-2 amidships, ~~preferably~~ close to the trae transition to the midships vessel protection area SSB-2.

16. (Currently Amended) The "~~corvette~~" corvette vessel-type equipment system as claimed in claims 9 ~~to 14~~, ~~in which~~ wherein a first electrical system having an air-breathing PEM fuel cell in a third vessel protection area SSB-3 ~~which~~ is arranged between a bow-end vessel protection area SSB-4 and amidships vessel protection area SSB-2, ~~preferably~~ close to the transition to the midships vessel protection area SSB-2, and a further electrical system with an air-breathing PEM fuel cell is arranged in the midships vessel protection area SSB-2, ~~preferably in its compartment V.~~
17. (Currently Amended) The "~~corvette~~" corvette vessel-type equipment system as claimed in claims 9 ~~to 16~~, ~~in which~~ wherein a second electrical system ~~having~~ includes one to four ~~and preferably two~~, generators ~~(8, 9)~~ and ~~having~~ includes one to four, ~~and preferably two~~, internal combustion engines, ~~preferably gas turbines (11, 12)~~, by means of which the generators ~~(8, 9)~~ can be driven, is arranged in amidships vessel protection area SSB-2.
18. (Currently Amended) The "~~corvette~~" corvette vessel-type equipment system as claimed in claim 17, ~~in which~~ wherein the gas turbines ~~(11, 12)~~ and the generators ~~(8, 9)~~ for the second electrical system are arranged in adjacent compartments VI, VII in the midships vessel protection area SSB-2.
19. (Currently Amended) The "~~corvette~~" corvette vessel-type equipment system as claimed in claims 9 ~~to 18~~, ~~in which~~ wherein a diesel reformer center with a diesel reformer ~~(10)~~ is arranged in the bow-end vessel protection area SSB-4, ~~preferably close to the~~

~~transition to the third vessel protection area SSB-3.~~

20. (Currently Amended) The "~~corvette~~" corvette vessel-type equipment system as claimed in claims 9 ~~to 18~~, ~~in which~~ wherein a diesel reformer center with a diesel reformer is arranged in the midships vessel protection area SSB-2, ~~preferably in the compartment VI.~~
21. (Currently Amended) The "~~corvette~~" corvette vessel-type equipment system as claimed in claims 9 ~~to 18~~, ~~in which~~ wherein a first diesel reformer center with a diesel reformer ~~(10)~~ is arranged in the bow-end vessel protection area SSB-4, ~~preferably close to the transition to the third vessel protection area SSB-3,~~ and a second diesel reformer center with a diesel reformer is arranged in the midships vessel protection area SSB-2, ~~preferably in the compartment VI.~~
22. (Currently Amended) The "~~corvette~~" corvette vessel-type equipment system as claimed in claims 9 ~~to 18~~, ~~in which~~ wherein a first diesel reformer center with a diesel reformer is arranged in the midships vessel protection area SSB-2, ~~preferably close to the further electrical system with an air-breathing PEM fuel cell in the compartment V,~~ and a second diesel reformer center with a diesel reformer is arranged in the third vessel protection area SSB-3, ~~preferably close to the first electrical system,~~ with an air-breathing fuel cell close to the transition to the midships vessel protection area SSB-2.
23. (Currently Amended) The "~~corvette~~" corvette vessel-type equipment system as claimed in claims 18 ~~to 22~~, ~~in which~~ wherein double-walled bulk heads are arranged between the adjacent compartments VI, VII with the gas turbines ~~(11,~~

~~12)~~ and the generators ~~(8, 9)~~ of the second electrical system in the midships vessel protection area SSB-2.

24. (Currently Amended) The ~~"corvette"~~ corvette vessel-type equipment system as claimed in claims ~~18 to 23~~, ~~in which~~ wherein the gas turbines ~~(11, 12)~~ in the compartment VI and the generators ~~(8, 9)~~ in the compartment VII for the second electrical system are each separated from one another by a central longitudinal bulk head in the midships vessel protection area SSB-2.
25. (Currently Amended) The ~~"corvette"~~ corvette vessel-type equipment system as claimed in claims ~~2 to 24~~, ~~whose~~ wherein a POD propulsion system ~~(2)~~ is designed for the ~~"corvette"~~ vessel-type equipment system to travel at a continuous cruise speed of, ~~for example~~, approximately 12 to 14 knots, and can be supplied with electrical power in this operating state by ~~means~~ way of two fuel cell segments ~~(6, 7)~~.
26. (Currently Amended) The ~~"corvette"~~ corvette vessel-type equipment system as claimed in claims ~~2 to 25~~, ~~whose~~ wherein waterjet propulsion segments ~~(3, 4)~~ are designed for the ~~"corvette"~~ corvette vessel-type equipment system to travel at a top speed of, ~~for example~~, approximately 30 knots, and can be supplied with electrical power in this operating state by ~~means~~ way of the two gas-turbine-powered generators ~~(8, 9)~~.
27. (Currently Amended) The ~~"corvette"~~ corvette vessel-type equipment system as claimed in claims ~~2 to 26~~, wherein ~~whose~~ waterjet propulsion segments ~~(3, 4)~~ can be supplied with electrical power from at least one of the fuel cell segments ~~(6, 7)~~ until the power limit of at least one of the fuel cell ~~segment or segments~~ ~~(6, 7)~~ is reached in

order to start up these waterjet propulsion segments ~~(3, 4)~~ with low emissions.

28. (Currently Amended) The "~~corvette~~" corvette vessel-type equipment system as claimed in claims 2 ~~to 27~~, wherein the system achieves speeds of more than 35 knots by operating its a POD propulsion system (2) and its a waterjet propulsion segments (3, 4) simultaneously, in which case the distribution of the electrical power which is produced by means way of the power generator segment can be achieved with optimized efficiency by means way of the power distribution segment and energy management for an automation carrier system vessel (29).
29. (Currently Amended) The "~~corvette~~" corvette vessel-type equipment system as claimed in claims 2 ~~to 28~~, wherein a power distribution segment is a propulsion network (14, 15) which is fed from fuel cells and by means of which the a POD propulsion segment (2) can be supplied with electrical power, and has a generator-fed propulsion network (17), by means of which the waterjet propulsion segments (3, 4) can be supplied with electrical power.
30. (Currently Amended) The "~~corvette~~" corvette vessel-type equipment system as claimed in claim 29, ~~in which~~ wherein the propulsion network (14, 15) which is fed from fuel cells has a stern-end network section (14) which is essentially associated with the stern-end vessel protection area SSB-1, and has a bow-end network section (15) which is essentially associated with the third vessel protection area SSB-3 and can be connected to the stern-end network section (14) via suitable coupling elements (16).

31. (Currently Amended) The "~~corvette~~" corvette vessel-type equipment system as claimed in claim 29 ~~or 30~~, in ~~which~~ wherein the generator-fed propulsion network ~~(17)~~ is essentially associated with the midships vessel protection area SSB-2 and can be connected to the propulsion network ~~(14, 15)~~, which is fed by ~~means~~ way of fuel cells, by ~~means~~ way of suitable coupling elements ~~(18, 19)~~.
32. (Currently Amended) The "~~corvette~~" corvette vessel-type equipment system as claimed in claim 30 ~~or 31~~, in ~~which~~ wherein an auxiliary propulsion system ~~(20)~~, which is arranged in the bow-end vessel protection area SSB-4, can be supplied with electrical power by ~~means~~ way of the bow-end network section ~~(15)~~ of the propulsion network ~~(14, 15)~~ which is fed by ~~means~~ way of fuel cells.
33. (Currently Amended) The "~~corvette~~" corvette vessel-type equipment system as claimed in claims 29 ~~to 32~~, in ~~which~~ wherein on-board network loads, ~~for example weapon system units (21, 22)~~, can be supplied with electrical power from the entire power generation segment, advantageously by ~~means~~ way of the propulsion network ~~(14, 15)~~ which is fed by ~~means~~ way of fuel cells.
34. (Currently Amended) The "~~corvette~~" corvette vessel-type equipment system as claimed in claims 29 ~~to 33~~, having further comprising low-voltage electrical systems ~~(23, 24)~~, ~~which are~~ arranged in various vessel protection areas SSB-1, SSB-3 can be connected to both propulsion networks ~~(14, 15, 17)~~ and can be connected to one another by ~~means~~ way of suitable coupling elements ~~(25)~~.
35. (Currently Amended) The "~~corvette~~" corvette vessel-type equipment system as claimed in claims 1 ~~to 34~~, whose

wherein an automation segment ~~(29)~~ includes an automation center ~~(30)~~ which has a large number of terminals ~~(32)~~ and a terminal bus ~~(31)~~, and has two or more servers ~~(33)~~, which are connected to the terminal bus ~~(31)~~ and to a system bus ~~(34)~~, and to which control networks ~~(35, 36, 37)~~ which are associated with different vessel protection areas SSB-1, SSB-2, SSB-3 and SSB-4 are connected.

36. (Currently Amended) The "~~corvette~~" corvette vessel-type equipment system as claimed in claim 35, ~~having further comprising a first control network (35), which is~~ essentially associated with the stern-end vessel protection area SSB-1 and with which the POD propulsion segment ~~(2)~~ and the vessel operating engineering ~~(38)~~, ~~which is~~ provided in the stern-end vessel protection area SSB-1, are associated.

37. (Currently Amended) The "~~corvette~~" corvette vessel-type equipment system as claimed in claim ~~35~~ 36 ~~or 36~~, ~~having further comprising a second control network (36), which is~~ essentially associated with the midships vessel protection area SSB-2 and with which the two gas-turbine-powered generators ~~(8, 9)~~, the two waterjet propulsion segments ~~(3, 4)~~ and the vessel operating engineering ~~(39)~~, ~~which is~~ provided in the midships vessel protection area SSB-2, are associated.

38. (Currently Amended) The "~~corvette~~" corvette vessel-type equipment system as claimed in claims ~~35 to 37~~, ~~having further comprising a third control network (37), which is~~ essentially associated with the third vessel protection area SSB-3 and the bow-end vessel protection area SSB-4 and with which the two fuel cell segments ~~(6, 7)~~, the diesel reformer ~~(10)~~, the thruster segment ~~(5)~~ and the vessel operating engineering ~~(4)~~ ~~which is~~ provided

in the third vessel protection area SSB-3 and in the bow-end vessel protection area SSB-4, are associated.

39. (New) The corvette vessel-type equipment system as claimed in claim 1, wherein a propulsion segment includes a 0.3 MW bow jet thruster.
40. (New) The corvette vessel-type equipment system as claimed in claim 2, wherein a propulsion segment includes a thruster segment.